Life Science Journal 2014 vol.11 N4, pages 358-363

Polymorphism of autosomal Alu- insertions

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Abstract

The polymorphism of mitochondrial DNA and Y chromosomes gives us the characteristics of male and female populations in the gene pool. Alu- repeats got their name due to the fact that most of them contain tetranucleotide AGCT (170 bp repeat from the beginning), which can be cleaved with the restriction enzyme Alu I. Alu- repeats influence the composition, organization, and expression of the genome. Alu- repeats are widely used as a genetic markers for genome mapping in clinical diagnosis and characterization of genomic rearrangements. Thus, in this article, we summarize the data on the origin and evolution of Alu-repeats, and the mechanisms of their retroposition which are used as genetic markers in genetics of populations.

Keywords

Alu-repeats, Mitochondrial DNA, Polymorphism, Y chromosomes